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EXAMINER

MORRISON, THOMAS A

ART UNIT	PAPER NUMBER
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3653

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,730

Applicant(s)

IIDA, JOJI

Examiner

Thomas A. Morrison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: (1) the recited "banknote" in line 8 should be -- a banknote --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what is meant by the recited "o banknotes" in line 2.

Claim 1 recites the limitation "the peripheral" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Also, claim 1 recites "the banknote" in line 10. It is unclear if this recitation refers to the previously recited "an uppermost banknote" in lines 4-5 or the previously recited "a banknote" in line 6.

Moreover, it is unclear from the claim language in claim 1, what is still in contact with the feed roller. Is the banknote in contact with the feed roller?

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Regarding claim 3, it is unclear from the claim language in line 13 of claim 3, what is in contact with the feed roller. Is the passageway or the banknote in contact with the feed roller at the same time?

Claim 5 recites the limitation "the received banknote" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites "accumulated discharged banknotes" in line 21. It is unclear if these banknotes are the same or different from the previously recited "accumulated banknotes" in line 19 of claim 7.

Claim 11 and its dependent claims 12-15 require "**a bank discharge unit**, the bank discharge unit including a **cavity** where the removable safe unit is attached, **a bank discharge unit**, a banknote transporting unit, and an accumulating unit". (emphasis added). Also, these claims require that, "the banknote discharge unit is located **above the cavity**". (emphasis added). It is confusing as to how many different bank discharge units are claimed. How can a bank discharge unit include a bank discharge unit and other elements, as claimed? Also, claim 11 does not make sense, in that claim 11 initially recites that the bank discharge unit includes a cavity, and then recites that the bank discharge unit is located above the cavity.

Moreover, claim 11 recites the limitation "the accumulated banknotes" in line 22. There is insufficient antecedent basis for this limitation in the claim.

In addition, claim 11 recites, "accumulated banknotes" in line 24. It is unclear if such accumulated banknotes the same as the previously recited "the accumulated banknotes" in line 22 or different banknotes.

Claim 12 recites the limitation "the front part" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the discharge direction" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Also, it is unclear in claim 12, what is meant by the recited "feed roller is located relative to the inclined storing section". How is it located relative to the storing section? It is located above, below, or beside the storing section?

Regarding claims 14-15, these claims use inconsistent language to recite the banknotes. It is unclear as to which banknotes (e.g., the recited rejected banknotes, a discharged banknote, a rejected discharged banknote) is referred to in the claim limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2 and 7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brannen in view of Hori. In particular, the combination of Brannen and Hori discloses all of the limitations of claims 1, 2 and 7.

Regarding independent claim 1, Figs. 1-3 of Brannen show a banknote dispensing device (10), comprising:

a banknote supply storing section (16) for storing banknotes (34);

a feed roller (46) having a peripheral edge disposed adjacent to the banknote supply storing section (16), the peripheral of the feed roller (46) contacts a surface of an uppermost banknote (34) in the banknote supply storing section (16) and the peripheral edge is maintained at a fixed position with the banknote supply storing section advancing a banknote to the fixed position,

the feed roller (46) discharging banknotes (34) one at a time from the banknote supply storing section (16) at a first predetermined speed; and

a transporting unit (including elements from 52 to 124) for receiving the banknote (34) from the banknote supply storing section (16) and transporting the banknote (34) at a second predetermined speed from the banknote supply storing section (16). Also, Fig. 1 of Brennan shows that the transporting unit has a first roller (52) and a pressure roller (54) in contact at a periphery to form a passageway for the banknote. This passageway is present whether or not the banknote is in contact with the feed roller (46). As such, this passageway meets the claimed limitations of the transporting unit. In any event, Fig. 1b of the Hori reference also shows a first roller (2) and a pressure roller (3) in contact at a periphery to form a passageway for a banknote (P) while still in contact with a feed roller (1). Thus, both references meet the claimed limitation of transporting unit set forth in claim 1.

Turning now to independent claim 7, Figs. 1-3 of Brennan show a banknote dispensing device (10), comprising:

a removable safe unit (16), the removable safe unit (16) including a banknote supply storing section (near 42) for retaining a supply of banknotes (34);

a banknote discharge unit (including 46), the banknote discharge unit (including 46) including a feed roller (46) having a peripheral edge disposed at a fixed position adjacent to the banknote supply storing section (near 42), the peripheral edge of the feed roller (46) for contacting a banknote (34) in the banknote supply storing section (near 42), the feed roller (46) being driven by a driving shaft driven by a first motor, the feed roller (46) discharging banknotes (34) one at a time from the banknote supply storing section (near 42) at a first predetermined speed (See Figs. 1-3 and column 2, line 41 to column 3, line 6),

a transporting unit (including elements 52 to 124) for receiving the banknote (34) from the banknote supply storing section (near 42) and transporting the banknote (34) at a second predetermined speed from the banknote supply storing section (near 42), at least part of the transport unit (including elements 50 to 124) being driven by a second motor;

an accumulating unit (126, 136) for receiving one or more banknotes (34) from the transporting unit (including elements 50 to 124), the accumulating unit (126, 136) having a package dispensing member (126) for dispensing the accumulated banknotes (34) to a user (column 4, lines 9-19); and

a control unit (66) for controlling the operation of the first motor, the second motor, and the package dispensing member (126) to dispense accumulated discharged banknotes (34) to the user.

With regard to independent claims 1 and 7, Brannen shows that the feed roller (46) is driven by a driving shaft, but does not specifically disclose that the feed roller

(46) is driven by a one-way clutch attached to the driving shaft. Also, Brannen does not specifically disclose that the transporting unit transports the banknote at a second speed that is faster than the first speed of the banknotes from the feed roller or that the feed roller discharges a banknote at the first speed while allowing the banknote to be pulled at the second speed.

The Hori patent discloses that it is well known that conventional sheet handling devices have feed rollers and transporting units that are located downstream from the feed rollers and operate at higher speeds than feed rollers. See, e.g., column 1, lines 9-67. Hori also discloses that it is well known to use a one-way clutch on a feed roller (1) arrangement of a sheet handling device to accommodate the difference between the speed of the feed roller (1) and the higher speed of a transporting unit downstream from the feed roller (1), to provide a paper handling device capable of reliably feeding paper. See, e.g., column 1, lines 9-67 and Abstract. It would have been obvious to one of ordinary skill in the art at the time of the invention, to operate the transport unit of Brennan at a predetermined speed that is faster than a predetermined speed of the feed roller of Brennan and to provide the feed roller (46) of Brennan with a one-way clutch to accommodate the speed difference, so as to provide a sheet handling device that is capable of reliably feeding paper, as taught by Hori. Regarding the limitation added to claims 1 and 7 which recites that the peripheral edge of the feed roller is maintained at a fixed position, it is noted that the Brennan and Hori references both disclose feed rollers that have peripheral edges disposed at a fixed position. First, Fig. 1 of Brennan shows a fixed feed roller (46). Second, Hori discloses a feed roller mechanism that allows a

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pressure applied by a feed roller (1) to a stack of sheets (P) to be adjusted via a spring 12 and a solenoid (11). Despite this pressure adjustment, the feed roller (1) is maintained in contact with the stack of sheets via a spring (6) that overcomes the force of the spring (12). See column 3, lines 6-13. As such, Hori also discloses a feed roller with a peripheral edge that is maintained in a fixed position. Accordingly, both references meet the fixed position limitation now set forth in claims 1 and 7.

Regarding dependent claim 2, Brannen discloses a sensor (132) for outputting a signal to indicate successful passage of a first banknote (34) through the transporting unit (including elements 50 to 124), wherein after a first banknote (34) arrives at the sensor (132), a second banknote (34) is discharged from the banknote supply storing section (16) at a predetermined time based on the rotating speed of the feed roller (46). The predetermined time will be the time between sheets that are fed while the feed roller (46) is rotating.

4. Claims 3-5, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brannen in view of Hori, and further in view of Klein et al.

Regarding claim 3, Figs. 1-3 of Brennan show a banknote dispensing device (10), comprising:

- a banknote supply storing section (16) for storing banknotes (34);
- a feed roller (46) having a peripheral edge disposed adjacent to the banknote supply storing section (16) at a fixed position, the feed roller discharging banknotes (34) one at a time from the banknote supply storing section (16) at a first predetermined speed;

a transporting unit (including elements from 50 to 124) for receiving banknote (34) from the banknote supply storing section (16) and transporting the banknote (34) at a second predetermined speed from the banknote supply storing section (16),

the transporting unit (including elements from 50 to 124) includes a first roller (52) and pressure roller (54) which have contact with their periphery to form a passageway for the banknote (34) which has contact with the feed roller (46) at the same time. As claimed, this limitation can be read broadly to mean that the passageway is formed at a time when the banknote contacts the feed roller (46). The passageway of (near 50) of Brennan is formed whether or not the banknote is in contact with the feed roller (46). As such, this passageway meets the claimed limitations of the transporting unit. In any event, Fig. 1b of the Hori reference also shows a first roller (2) and a pressure roller (3) in contact at a periphery to form a passageway for a banknote (P) while still in contact with a feed roller (1). Thus, both references meet the claimed limitation of transporting unit set forth in claim 3.

Brennan also shows a first sensor (62) for detecting the presence of the banknote (34) received by the transporting unit (including elements 50 to 124), the first sensor (62) outputting a first signal to indicate the presence of the banknote (34) adjacent to the first sensor (62);

a second sensor (132) for detecting the presence of the banknote (34) as the banknote (34) is emitted by the transporting unit (including element 124), the second sensor (132) outputting a second signal to indicate the presence of the banknote (34) adjacent to the second sensor (132); and

a control unit (66) for receiving and processing the first signal and the second signal.

Brannen shows that the feed roller (46) is driven by a driving shaft, but does not specifically disclose that the feed roller (46) is driven by a one-way clutch attached to the driving shaft. Moreover, Brannen does not specifically disclose that the transporting unit transports the banknote at a second speed that is faster than the first speed of the banknotes from the feed roller or that the feed roller discharges a banknote at the first speed while allowing the banknote to be pulled at the second speed. In addition, the Brennan patent does not specifically disclose that the control unit compares the timing of the first signal with the second signal to determine whether the banknote has properly passed through the transporting unit.

The Hori patent discloses that it is well known that conventional sheet handling devices have feed rollers and transporting units that are located downstream from the feed rollers and operate at higher speeds than feed rollers. See, e.g., column 1, lines 9-67. Hori also discloses that it is well known to use a one-way clutch on a feed roller (1) of a sheet handling device to accommodate the difference between the speed of the feed roller (1) and the higher speed of a transporting unit downstream from the feed roller (1), to provide a paper handling device capable of reliably feeding paper. See, e.g., column 1, lines 9-67 and Abstract. It would have been obvious to one of ordinary skill in the art at the time of the invention, to operate the transport unit of Brennan at a predetermined speed that is faster than a predetermined speed of the feed roller of Brennan during discharge of banknotes and to provide the feed roller (46) of Brennan

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with a one-way clutch to accommodate the speed difference, so as to provide a sheet handling device that is capable of reliably feeding paper, as taught by Hori. Regarding the limitation added to claim 3 which recites that the peripheral edge of the feed roller is at a fixed position, it is noted that the Brennan and Hori references both disclose feed rollers that have peripheral edges disposed at a fixed position. First, Fig. 1 of Brennan shows a fixed feed roller (46). Second, Hori discloses a feed roller mechanism that allows a pressure applied by a feed roller (1) to a stack of sheets (P) to be adjusted via a spring 12 and a solenoid (11). Despite this pressure adjustment, the feed roller (1) is maintained in contact with the stack of sheets via a spring (6) that overcomes the force of the spring (12). See column 3, lines 6-13. As such, Hori also discloses a feed roller with a peripheral edge that is at a fixed position. Accordingly, both references meet the fixed position limitation now set forth in claim 3.

The Klein et al. patent discloses that it is well known to use the signals from a plurality of sensors (119) provided along a transport unit of a sheet handling device, to monitor the timing of bills as they are conveyed past the sensors (119) and adjust the conveyance of the bills to correct for slippage of the bills. See Fig. 4 and column 9, lines 46-61. It would have been obvious to one of ordinary skill in the art at the time of the invention, to use the first and second signals of the first and second sensors 62 and 132, respectively, of Brennan to compare the timing of the first signal with the second signal and determine whether a banknote has properly passed through the transport unit, so as to accommodate for any slippage of the banknotes, as taught by Klien et al.

Regarding claim 4, Brennan also discloses that the banknote supply storing section (16) is a cartridge. As such, it is removable from the dispensing device. See column 2, line 3.

Regarding claim 5, Fig. 1 of Brennan shows that the banknote dispensing device (10) has a diverting unit (102, 104) for diverting the banknote (34) from a first path (between 140 and 124) to a second path (106), the first path being the normal banknote discharge path;

a rejected banknote storing section (112), the second path (106) being the rejected banknote storing path; and

a third sensor (116) for detecting the presence of the banknote (34) adjacent the third sensor (116), the third sensor outputting a third signal to indicate successful passage of the received banknote (34) through the transporting unit (including elements 52 to 124) and to the rejected banknote storing section (112).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brennan in view of Hori as applied to claim 7 above, and further in view of Klein et al.

Regarding claim 8, Fig. 1 of Brennan shows that the banknote dispensing device (10) further comprises

a first sensor (62) for detecting the presence of the banknote (34) received by the transporting unit (including elements 52 to 124) from the banknote discharge unit (including 46), the first sensor (62) outputting a first signal to the control unit (66) indicating a predetermined property of the banknote (34) adjacent to the first sensor (62); and

a second sensor (132) for detecting a predetermined property of the banknote (34) as the banknote (34) is passed to the accumulating unit (126,136) of the dispensing device, the second sensor (132) outputting a second signal to the control unit (66) indicating successful passage of the banknote (34) through the transporting unit (including elements 52 to 124) into the accumulating unit (126,136), wherein the control unit (66) receives and processes the first signal and the second signal. The combination of Brennan and Hori does not specifically disclose that the control unit (66) compares the timing of the first signal with the second signal to determine whether each banknote has properly passed through the transporting unit to the accumulating unit.

The Klein et al. patent discloses that it is well known to use the signals from a plurality of sensors (119) provided along a transport unit of a sheet handling device, to monitor the timing of bills as they are conveyed past the sensors (119) and adjust the conveyance of the bills to correct for slippage of the bills. See Fig. 4 and column 9, lines 46-61. It would have been obvious to one of ordinary skill in the art at the time of the invention, to use the first and second signals from the first and second sensors (62 and 132), respectively, of Brennan to compare the timing of the first signal with the second signal and determine whether a banknote has properly passed through the transport unit, and then accommodate for any slippage of the banknotes, as taught by Klein et al.

Allowable Subject Matter

6. Claims 6, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the


limitations of the base claim and any intervening claims. Also, these claims need to be amended to overcome the rejection under 35 U.S.C. 112, second paragraph as set forth above.

Conclusion

7. The fact that the examiner has not included prior art rejections for the newly added claims 11-15 should not be construed to mean that such claims contain allowable subject matter. As noted above in the rejection under 35 U.S.C. 112, second paragraph, it is unclear what is claimed in these new claims. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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